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**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**LINDBERG HEAT TREATING COMPANY
MELROSE PARK, IL
ILD 005 071 808**

FINAL REPORT

EPA Region 5 Records Ctr.



315242

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

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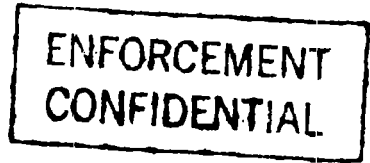
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EXECUTIVE SUMMARY

PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Lindberg Heat Treating Company (Lindberg) facility in Melrose Park, Illinois. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritization of RCRA facilities for corrective action.

The Lindberg facility heat-treats metal alloy parts for the automotive, agricultural, aerospace and defense industries. The 12-acre facility (located in a light industrial area) began operations in 1952. Heat-treating wastes containing cyanide were generated, stored, and treated on site until cyanide heat-treating was discontinued in 1987. The facility currently generates salt sludges (D005), spent solvents (F002), nonhazardous wastewaters, associated treatment sludges, spent filters, and process dust.

Hazardous wastes generated are no longer treated on site or stored for longer than 90 days. RCRA closure of Lindberg's wastewater treatment system was approved by the Illinois Environmental Protection Agency (IEPA) in 1989. RCRA closure of Lindberg's container storage area has not yet been approved, but the area is currently not used for any waste management purposes.

The PA/VSI identified the following six SWMUs and one AOC at the facility:

Solid Waste Management Units

1. Waste Accumulation Area
2. Satellite Accumulation Areas
3. Oil-Water Separators
4. Dust Collectors
5. Former Wastewater Treatment System
6. Former Waste Container Storage Area

Areas of Concern

1. Pumphouse Underground Storage Tanks (UST) 1, 2, and 3

Corrective action is currently underway to address releases from three on-site USTs (AOC 1). Releases of quench oil and volatile organic compounds (VOC) to on-site soil and ground water have been observed and documented in an assessment of three USTs at the facility

(AOC 1). The assessment was conducted by Lindberg's environmental consultant, Mabbett, Capaccio, and Associates (MCA).

Satellite Accumulation Areas (SWMU 2) pose a moderate potential for release to on-site soil and ground water due to a 1,1,1-trichloroethane (TCA) release from a satellite accumulation drum. PRC observed evidence of the release during the VSI. In the assessment conducted by MCA it was concluded that the VOC contamination discovered in AOC 1 was most likely due to aboveground solvent storage at the facility (MCA, 1990). The Oil-Water Separators (SWMU 3) have a moderate potential for on-site soil and ground-water release. The structural integrity of SWMU 3 is unknown, and PRC detected a solvent odor in SWMU 3 during the VSI. The Former Waste Container Storage Area (SMWU 6) also has a moderate potential for release to on-site soil and ground water. An IEPA inspection on September 27, 1989 documented spills in SWMU 6. All other SWMUs have a low potential for release to on-site soil and ground water. They are all located indoors on a concrete floor.

The potential for release to surface water for all SWMUs and AOC 1 is low. Geological characteristics of the site would tend to limit off-site migration of contaminants towards Silver Creek, 1200 feet east of the facility.

A release to air may have already occurred from the Oil-Water Separators (SWMU 3). Although PRC detected a solvent odor in the south separator during the VSI, the amount released does not seem to pose a severe threat to human health or the environment. All other SWMUs are located indoors, and contamination in AOC 1 is limited to subsurface media. Therefore, their potential for release to air is low.

PRC recommends that (1) secondary containment be provided for the satellite drum of 1,1,1-TCA in SWMU 2; (2) the material in the south Oil-Water Separator (SWMU 3) be sampled for VOCs; (3) soil and ground water in AOC 1 be sampled to determine the current status of VOC contamination, with results submitted to IEPA and EPA to determine the need for further corrective action. No further action is recommended for the remaining SWMUs.

Site security appears to be adequate. It is fenced and all active SWMUs except the Oil-Water Separators (SWMU 3) are indoors. Receptors most likely to be affected by a release from this facility include Lindberg employees, employees of neighboring industries, and occupants of a baseball diamond across the street from the facility. All water in the area is obtained from Lake Michigan.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- **Identify SWMUs and AOCs at the facility.**
- **Obtain information on the operational history of the facility.**
- **Obtain information on releases from any units at the facility.**
- **Identify data gaps and other informational needs to be filled during the VSI.**

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- **Identify SWMUs and AOCs not discovered during the PA.**
- **Identify releases not discovered during the PA.**
- **Provide a specific description of the environmental setting.**
- **Provide information on release pathways and the potential for releases to each medium.**
- **Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases.**

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Lindberg Heat Treating Company (Lindberg) facility in Melrose Park, Illinois. The PA was completed on August 20, 1991. PRC gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. The VSI was conducted on August 21, 1991. It included interviews with Lindberg facility representatives and a walk-through inspection of the facility. Six SWMUs and one AOC were identified at the facility.

PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 20 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C. Additional information regarding AOC 1 is included in Attachment D.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

The Lindberg facility is located at 1975 North Ruby Street, Melrose Park, Cook County, Illinois, approximately 5 miles west of Chicago (latitude 87° 52' 25" N, longitude 41° 54' 20" W). The facility occupies approximately 12 acres (with about 25,000 square feet of manufacturing area) in a light industrial area. Access is via Ruby Street and Indian Boundary Drive. Lindberg is surrounded by other light industries to the north and west, a baseball diamond to the south, and railroad tracks to the east (see Figure 1).

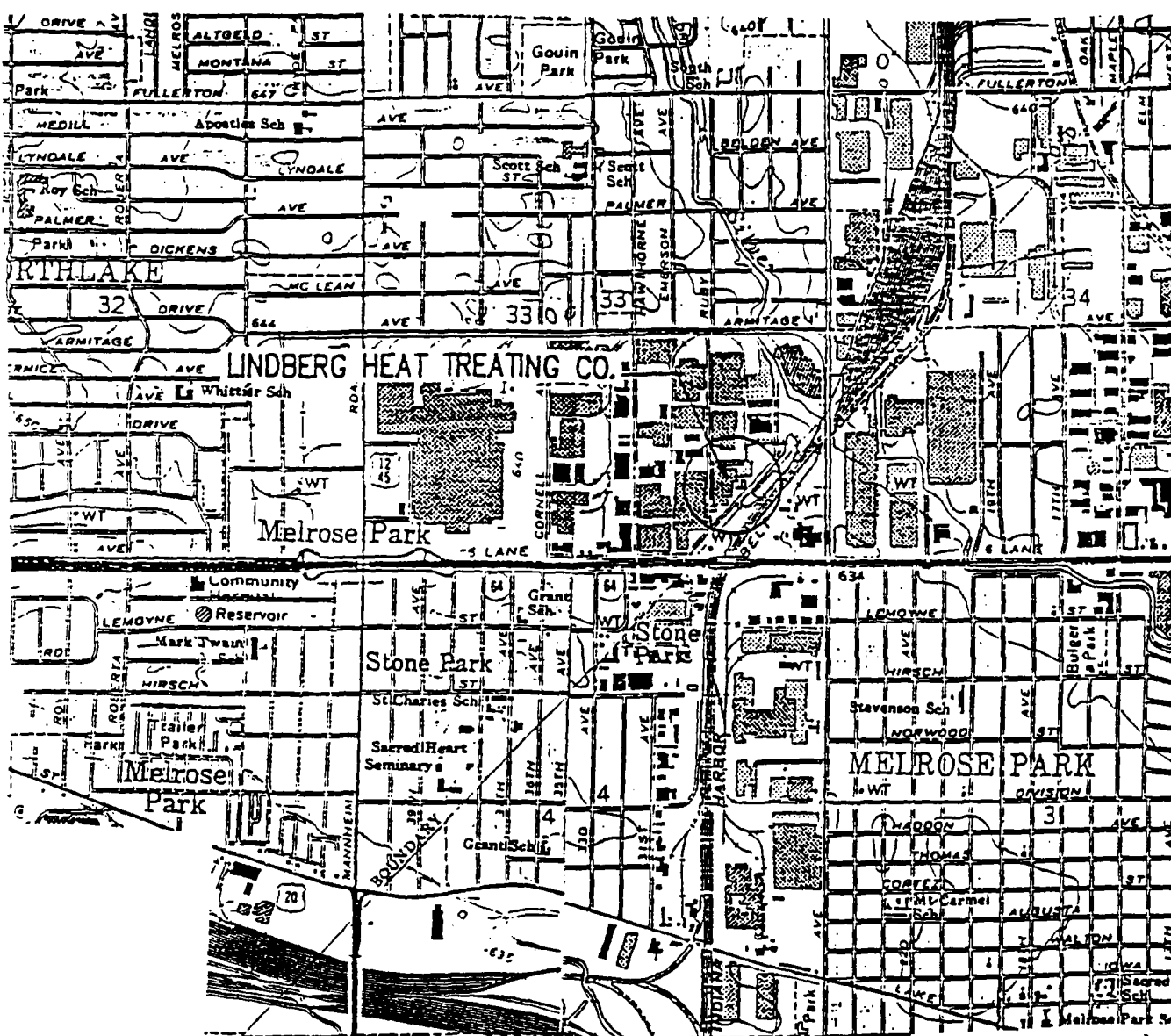
2.2 FACILITY OPERATIONS

Lindberg heat treats metal alloys for use in the automotive, agricultural, aerospace, and defense industries. The facility has been in operation since 1952 and currently employs about 80 people. Until 1987, Lindberg employed a heat-treating process that used cyanides. When this process was discontinued, several waste streams were eliminated, including quench oil bath sludges (F010), spent cyanide solutions and pot skimmings (F011), cyanide quench water (F012), and lead pot sludges (D008). These wastes were managed in one of two SWMUs that are currently inactive (see Table 1).

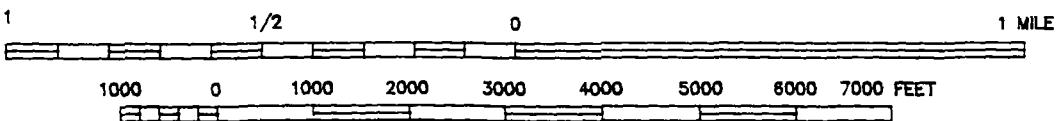
The facility currently operates the following different types of heat-treating lines.

- Traditional gas-fired furnace lines
- Neutral salt lines
- High-speed barium salt lines
- Gantry lines for treating large parts such as rocket engine casings
- Electric heat-treating lines
- Gas heat-treating lines
- o Process development lines for research and development

Processes employed on the above lines include prewashing, shotblasting, preheating, immersion in molten salt baths, heating in various types of furnaces, oil quenching, and subsequent washing.



SCALE 1:24000



QUADRANGLE LOCATION

RIVER FOREST, ILL.
N4152.5-W8745/7.5

1963
PHOTOREVISED 1972
AMS 3487 IV NE-SERIES V883

LINDBERG HEAT TREATING COMPANY
MELROSE PARK, ILLINOIS

FIGURE 1
FACILITY LOCATION

PMC ENVIRONMENTAL MANAGEMENT, INC.

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SOURCE: U.S.G.S.

TABLE 1
SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Waste Accumulation Area	No	Active, less than 90-day storage
2	Satellite Accumulation Areas	No	Active
3	Oil-Water Separators	No	Active
4	Dust Collectors	No	Active
5	Former Wastewater Treatment System	Yes	RCRA closed
6	Former Waste Container Storage Area	Yes	Undergoing RCRA closure; not operated since 1989

Note:

* A RCRA hazardous waste management unit is one that currently requires or formerly required a RCRA permit.

2.3

WASTE GENERATING PROCESSES

Wastes generated from current facility operations include salt sludges (D005), spent 1,1,1-trichloroethane (1,1,1-TCA) (F002), dust, process wastewater, oil sludges, and oil filters. These wastes are managed in one of four active SWMUs. Table 1 lists active and inactive SWMUs at this facility. Table 2 lists wastes currently generated at the facility and their primary management units. Figure 2 shows the general layout of the facility and SWMU and AOC locations.

Salt sludge generated from the neutral salt and high-speed barium salt lines is classified as D005 waste because of its barium content. The sludge is collected in drums at Satellite Accumulation Areas (SWMU 2). Full drums are then placed in the Waste Accumulation Area (SWMU 1). Shipments are made within 90 days to Chem Met services in Wyandote, Michigan for treatment and disposal. Twenty-six drums have been shipped in 1991.

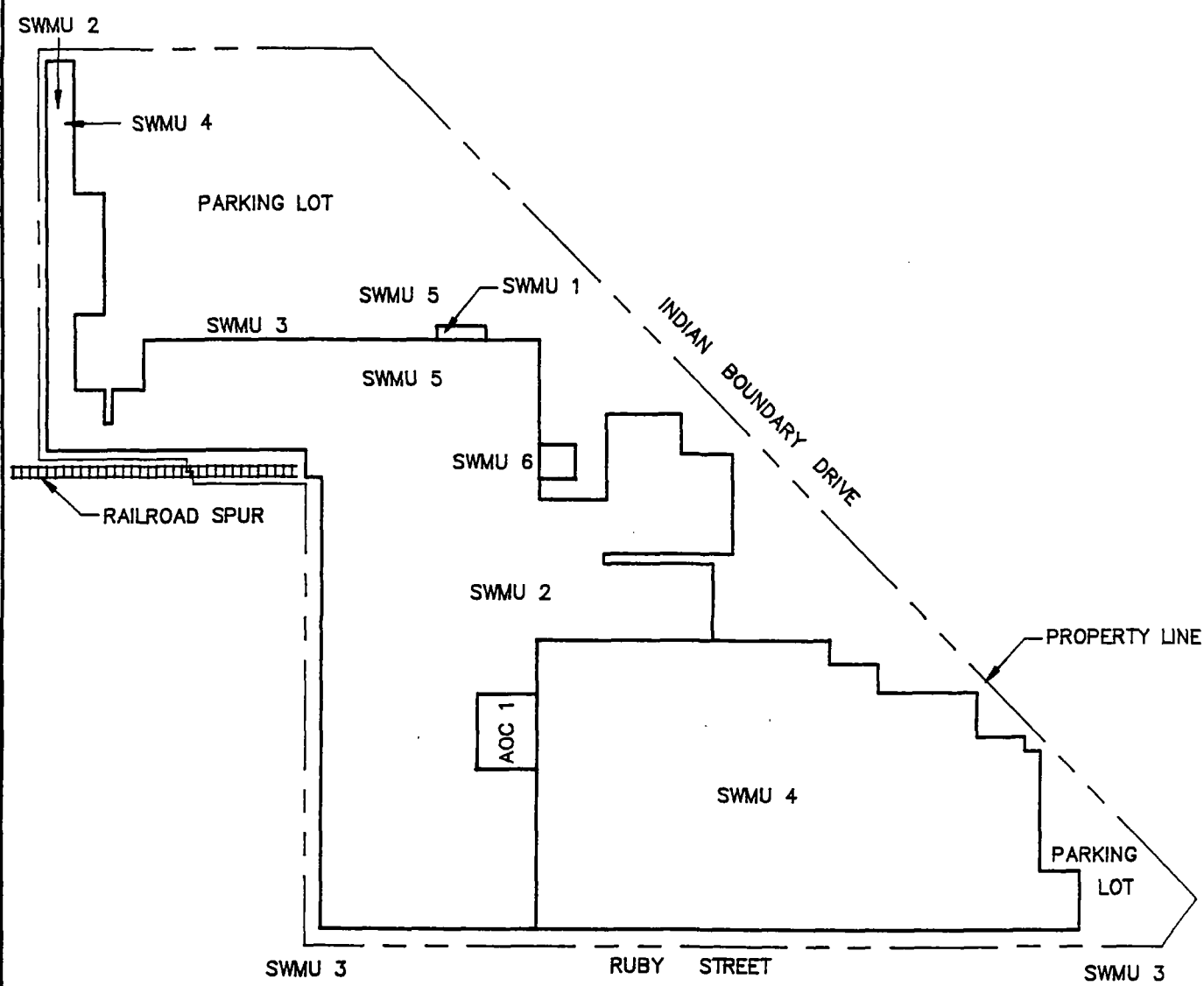
Spent 1,1,1-TCA (F002) is generated from dip cleaning of parts. Prior to 1987, trichloroethene (TCE) (F002) was used as a cleaning agent. The waste is collected in drums at Satellite Accumulation Areas (SWMU 2) and then transferred to the Waste Accumulation Area (SWMU 1). Shipments are made within 90 days to Safety Kleen in Franklin Park, Illinois. The generation rate for this waste is very low. The last shipment of one drum took place approximately 1 or 2 years ago.

Nonhazardous shot^{blast}dust dust is generated from two shotblast operations at the facility. Dusts are managed in two separate Dust Collectors (SWMU 4). When a full 55-gallon drum of dust is collected, it is transferred to the Waste Accumulation Area (SWMU 1), and eventually shipped to the Altrachem Landfill facility in Joliet, Illinois, for disposal.

Nonhazardous process wastewaters are generated throughout the facility. This material travels via pipes and floor drains to one of three Oil-Water Separators (SWMU 3). Effluent from these separators is discharged to the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). Sludge is pumped directly out of the separators by a licensed special waste hauler and taken to Motor Oils Refining Company in McCook, Illinois, for treatment. A total of 5,950 gallons have been shipped off site in 1991. Spent oil filters are placed in 55-gallon drums and placed in the Waste Accumulation Area (SWMU 1). Drums are eventually shipped to the Altrachem facility in Joliet, Illinois, for disposal.

TABLE 2
SOLID WASTES

<u>Waste/EPA Waste Code</u>	<u>Source</u>	<u>Primary Management Unit</u>
Salt Sludges/D005	Barium and neutral salt lines	SWMU 1 and 2
Spent 1,1,1-TCA/ F002	Dip cleaning of parts	SWMU 1 and 2
Dust	Shotblasting of parts	SWMU 1 and 4
Process Wastewater	All process lines	SWMU 3
Oil Sludge	Oil-Water Separators (SWMU 3)	SWMU 3
Oil Filters	Oil-Water Separators (SWMU 3)	SWMU 1



LEGEND:

- SWMU 1 - WASTE ACCUMULATION AREA
- SWMU 2 - SATELLITE WASTE ACCUMULATION AREAS
- SWMU 3 - OIL-WATER SEPARATORS
- SWMU 4 - DUST COLLECTORS
- SWMU 5 - FORMER WASTEWATER TREATMENT SYSTEM
- SWMU 6 - FORMER WASTE CONTAINER STORAGE AREA
- AOC 1 - PUMP HOUSE 1,2,AND 3

60' 0 60' 120'
SCALE: 1" = 120'

LINDBERG HEAT TREATING COMPANY
MELROSE PARK, ILLINOIS

FIGURE 2
FACILITY LAYOUT

PRC ENVIRONMENTAL MANAGEMENT, INC.

When Lindberg performed cyanide heat-treating, quench oil bath sludges (F010), spent cyanide solutions and pot skimmings (F011), lead pot skimmings (D008), and spent TCE (F002) were generated and stored in the Former Waste Container Storage Area (SWMU 6). Cyanide quench water (F012) was treated in the Former Wastewater Treatment System (SWMU 5). Generation of these wastes ceased in 1987 when cyanide heat-treating was discontinued.

2.4 HISTORY OF DOCUMENTED RELEASES

On August 8, 1989, Lindberg's environmental consultant, Mabbett, Capaccio, and Associates (MCA), notified IEPA of a suspected release from the pumphouse underground product quench oil tanks 1, 2, and 3 (AOC 1). A visual inspection of the tanks conducted on November 17, 1989, revealed small holes in tanks 2 and 3, which were then taken out of service. Tank 1 was also taken out of service on December 12, 1989, as a precautionary measure. MCA performed a site assessment in July and September, 1989, in accordance with an IEPA approved work plan. The assessment revealed quench oil and volatile organic compounds (VOC) contamination in soil and ground water underneath and near the pumphouse. A 4-inch-thick layer of free-phase quench oil was also discovered on a perched ground-water table about 3 feet below grade (MCA, 1990). Further information on this incident can be found in Section 4.0 and Attachment D of this report.

Stains on the floor of the Former Waste Container Storage Area (SWMU 6) were observed and documented during an August 27, 1989 IEPA inspection (IEPA, 1989b). The area was not being used for storage of waste at that time. As part of ongoing closure activities of this unit, MCA plans to sample the soil beneath the unit's concrete base to determine if a release of hazardous waste or hazardous constituents has occurred.

2.5 REGULATORY HISTORY

Lindberg submitted its first notification of hazardous waste activity on August 14, 1980, indicating that it operated as a generator of hazardous waste (U.S. EPA, 1980). Lindberg submitted a Part A permit application for hazardous waste storage in containers (S01) and tanks (S02) and hazardous waste treatment in tanks (T01) on April 19, 1982 (U.S. EPA, 1982a). At that time, the tank storage and treatment units were collectively known as the facility's Wastewater Treatment System (SWMU 5), and the container storage unit was known as the Waste Container Storage Area (SWMU 6). On October 13, 1982, EPA filed a complaint against Lindberg for untimely submittal of the Part A permit application (U.S. EPA, 1982b). A consent agreement and final order was subsequently issued on November 18, 1982. Under this order, Lindberg's Part A permit application was accepted as if it was filed in a timely manner (U.S. EPA, 1982c).

IEPA inspected the facility again on August 6, 1985, and cited Lindberg for numerous violations of federal and state standards applicable to hazardous waste generators and treatment, storage and disposal facilities (IEPA, 1985a). Lindberg received a letter from IEPA summarizing the above violations on September 24, 1985 (IEPA, 1985b). The PA/VSI revealed no record of Lindberg's response to this letter.

In 1989, Lindberg conducted closure activities at the three units identified in their part A. On March 3, 1989, IEPA inspected the tank storage and treatment units to verify that closure had been completed in accordance with the facility's IEPA approved closure plan. The inspection revealed that these units were adequately closed. IEPA gave written approval of the closure on March 27, 1989 (IEPA, 1989a). A similar IEPA inspection was conducted on September 27, 1989, to verify adequate closure of the Former Waste Container Storage Area (SWMU 6). Because stains from past releases were visible on the floor of this unit, IEPA could not approve the closure (IEPA, 1989b). Although this unit is inactive it is still considered open under RCRA. The facility's consultant, MCA, plans to collect soil samples from beneath the unit's concrete floor to determine if contamination exists and if further corrective action is needed.

Lindberg holds permit No. 031186AAMP from IEPA's Division of Air Pollution Control for operation of numerous process emission sources and air pollution control equipment (IEPA, 1991). PRC found no record of permit violations.

Lindberg also has a permit from MWRDGC to discharge effluent from the Oil-Water Separators (SWMU 3) (MWRDGC, 1991).

This facility does not require an NPDES permit, and no ongoing CERCLA activity is currently being conducted at Lindberg.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Lindberg facility.

2.6.1 Climate

Cook County has a typical humid climate due in part to its proximity to Lake Michigan. The average temperature is 33°F in winter and 81°F in summer. The average wind speed is about 8.4 knots. Winds are typically out of the north-northeast in winter and south in the summer.

The average annual precipitation is 32 inches. The maximum 1-year, 24 hour rainfall is 4.62 inches (U.S. Department of Commerce, 1980).

2.6.2 Flood Plain and Surface Water

The Lindberg facility is located in the Des Plaines River drainage basin. The nearest surface water is Silver Creek, approximately 1200 feet east of the facility. Surface migration from the facility would be east to northeast toward Silver Creek. The facility is located on a 100-year floodplain (Federal Emergency Management Agency, 1981).

2.6.3 Geology and Soils

Cook County is located in an area of glacial drift deposited over bedrock. The bedrock consists of layers of limestone, shale, and sandstone. The drift materials deposited include tills of various compositions, including sand and gravel deposited by streams and rivers flowing from the glaciers and by the discharge from glacial lakes; and sand, silt, and clay deposited in the lakes dammed by the glaciers. Depths to bedrock in the Melrose Park area typically range from 75 to 200 feet below ground surface (bgs) [Illinois State Geological Survey (ISGS) 1940 to 1944].

Soil at the site was classified during MCA's assessment of Pumphouse USTs 1, 2, and 3 (AOC 1) in 1990. Soil borings in the area revealed that soil in the vicinity of the pumphouse consisted of gravelly sand and silt to 3 feet bgs and gray clay with some silt to 26.5 feet bgs (MCA, 1990).

2.6.4 Ground Water

All drinking water in Melrose Park and the surrounding area is supplied by Lake Michigan.

Boring logs for public and private wells indicate ground-water depths varied from 50 to 420 feet bgs in Melrose Park (ISGS, 1940 to 1944). In 1940, the nearest well was located approximately 3/4 mile northwest of the facility. This well was used for residential purposes; however, this well apparently is no longer operating. Site-specific ground-water information was obtained by MCA during the 1990 assessment of Pumphouse USTs 1, 2, and 3 (AOC 1). Measurements from monitoring wells installed in this area show ground-water depths ranging from 3 to 7 feet bgs. However, a distinct ground-water flow direction could not be determined.

Borings made during the assessment suggest that subsurface inconsistencies and localized collection of ground water were caused by (1) installing subsurface structures such as foundation walls and USTs, (2) excavating naturally occurring clay, and (3) backfilling with gravelly sand fill (MCA, 1990).

Regional topography seems to suggest that shallow ground water in the area would flow east to northeast towards Silver Creek. However, the perched ground water underneath the Lindberg facility is not expected to flow in this manner due to the presence of underlying clays that would restrict movement (MCA, 1990).

The 1990 assessment also revealed on-site soil and ground-water contamination resulting from releases of quench oil and VOCs. Further information on this matter can be found in Sections 4.0 and Attachment D of this report.

2.7 RECEPTORS

Melrose Park, Illinois has a population of 20,700 (U.S. Department of Commerce, 1980). The Lindberg facility is in an area characterized primarily by light industry. Small industrial establishments are located to the north and west; a railroad and a baseball diamond are located to the east and south, respectively. The nearest residential area is about 1/2 mile to the southeast, and the nearest school is about 3/4 mile to the southeast. The nearest surface water, Silver Creek, approximately 1200 feet east of the facility, is used for recreational purposes.

Ground water in the area is not used for any purpose. All water for residential and industrial use is supplied by Lake Michigan. The nearest well located at a residence 3/4 mile to the northwest has not been operated since the 1940s.

A Cook County forest preserve, approximately 2 miles east of the facility, is the only sensitive environment within a 2-mile radius.

The site is fenced and the building is locked when the facility is not operating. All active SWMUs except for the Oil-Water Separators are indoors.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the six SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC observations.

SWMU 1

Waste Accumulation Area

Unit Description: This unit is used to accumulate hazardous and nonhazardous special wastes in 55-gallon drums. All hazardous waste is shipped off site within 90 days. The unit encompasses an area of about 500 square feet and is located in the central portion of the property along the east end of the building. The unit consists of a metal shed with a concrete floor and is capable of holding approximately 40 drums (see Photo Nos. 1 and 2).

Date of Startup: This unit began operation in 1989.

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages salt sludges (D005), spent 1,1,1-TCA (F002), nonhazardous oil filters, and shotblast dust.

Release Controls: All drums are closed during accumulation. The area is completely enclosed and has a concrete floor.

History of Documented Releases: This unit has no documented release history.

Observations: The unit appeared to operate safely and was in good condition. PRC observed no evidence of a release.

SWMU 2

Satellite Accumulation Areas

Unit Description: This unit is used to accumulate certain wastes at the point of generation. This type of accumulation was occurring in two separate areas of the plant at the time of the VSI and consists of 4 separate accumulation drums. Spent 1,1,1-TCA (F002) was being

accumulated in the central portion of the facility in a 55-gallon drum. Salt sludges (D005) were being accumulated in three 55-gallon drums in the northeast corner of the facility (see Photo Nos. 3, 4, 5, and 6).

Date of Startup: This unit began operation in 1952.

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages spent 1,1,1-TCA (F002) and salt sludges (D005).

Release Controls: The drums are located indoors on a concrete floor.

History of Documented Releases: This unit has no documented release history.

Observations: One drum of salt sludge had stains on the outside of the drum, suggesting that it had been overfilled; however, no spills were observed on the floor surrounding the drum. PRC observed absorbent material to treat a spill on the floor surrounding the drum of spent 1,1,1-TCA.

SWMU 3

Oil-Water Separators

Unit Description: Three oil-water separators are used to remove oil from process wastewaters throughout the facility. Two of the separators are located outdoors along Ruby Street at the north and south ends of the facility, with capacities of 2000 and 4000 gallons, respectively. The third separator is located outdoors along the west end of the northeast parking lot and has a capacity of 1000 gallons. Each separator consists of a series of in-ground concrete bays with various filters (see Photo Nos. 7 through 3). Effluent from the separators is discharged to MWRDGC, which conducts annual monitoring for biochemical oxygen demand and suspended solids (MWRDGC, 1991).

Date of Startup: This unit began operations in 1952.

Date of Closure:	This unit is currently active.
Wastes Managed:	This unit manages nonhazardous process wastewaters and generates nonhazardous oil sludge that is removed from this SWMU indirectly into a handling vehicle for off-site disposal.
Release Controls:	No other known release controls exist other than the structural integrity of the concrete bays, which could not be completely evaluated at the time of the VSI because the bays were partially full.
History of Documented Releases:	This unit has no documented release history.
Observations:	The amount of material in the separator bays ranged from about 1/2 full to almost empty. PRC observed no cracks or leaks in the visible portions of the separator bays. PRC noted a strong solvent odor in the southernmost (final) bay of the south separator and at the sanitary sewer discharge point for this separator.
SWMU 4	Dust Collectors
Unit Description:	<p>This unit consists of two cyclone and baghouse systems that collect dust from shot blast operations (see Photo Nos. 14 through 18). The first dust collector is located in the southwest portion of the facility. Dust composed of steel shot is deposited from the cyclone and baghouse system into a 4-foot by 2-foot by 2-foot steel box. The contents of the box are transferred to a 55-gallon drums when the box becomes full. The other dust collector is located in the northeast portion of the facility. Dust composed of aluminum oxide is deposited from the cyclone and baghouse system into a small cardboard box (approximately 1 cubic foot). When the box is full, it is transferred to a 55-gallon drum located a few feet away. Operation of this unit is permitted by IEPA's division of air pollution control (IEPA, 1991). When the drum is full it is moved to SWMU 1 to await off-site shipment.</p>
Date of Startup:	This unit probably began operating in the mid-1950s.

Date of Closure:	This unit is currently active.
Wastes Managed:	This unit manages shotblast dust composed of steel shot and aluminum oxide.
Release Controls:	The cyclone and baghouse systems are completely enclosed. However, the containers used to collect the dust as it exits the systems are open at the top.
History of Documented Releases:	This unit has no documented history of release.
Observations:	PRC observed dust releases on the floor of the areas surrounding both dust collectors during the VSI.
SWMU 5	Former Wastewater Treatment System
Unit Description:	This former unit was identified on the facility's Part A permit application with the S02 and T01 process codes (see Photo No. 19). It was used to treat process wastewaters from former cyanide heat-treating operations. It was located in the eastern central portion of the facility and consisted of the following major components: (1) a 20,000-gallon, in-ground concrete tank for influent wastewater; (2) a 3,500-gallon, steel cyanide destruction tank; (3) three 1350-gallon, steel evaporation tanks; (4) one 5,000-gallon, steel tank for periodic storage of excess wastewater. The inground storage tank was located outdoors. All other tanks were located indoors. The system was capable of processing up to 1,224 gallon per day (Lindberg, 1985).
Date of Startup:	This unit began operations in 1952.
Date of Closure:	RCRA closure of this unit was approved by IEPA in 1989. All of the major components were removed during the closure.
Wastes Managed:	This unit manages process wastewaters from cyanide heat treating operations (F012).

Release Controls:	All treatment equipment and the excess wastewater tank were located indoors on a concrete base. The outdoor in-ground storage tank was reported to be of sound structural integrity at the time of closure.
History of Documented Releases:	This unit had no documented history of release.
Observations:	At the time of the VSI, the former location of the inground tank had been backfilled and covered with concrete. The former location of the indoor components was vacant. PRC observed no evidence of past releases in the area.
SWMU 6	Former Waste Container Storage Area
Unit Description:	This unit was identified on the facility's Part A permit application with the S01 process code. It was used for greater than 90-day storage of hazardous waste. The unit was located indoors, slightly southwest of the Former Wastewater Treatment System (SWMU 5); it encompassed an area of approximately 1060 square feet and could hold a maximum of 204 55-gallon drums (Lindberg, 1985).
Date of Startup:	This unit began operations in 1952.
Date of Closure:	Operation of this unit ceased in 1989, but IEPA has not yet approved RCRA closure due to stains observed on the floor during an IEPA inspection on September 27, 1989.
Wastes Managed:	This unit managed spent TCE and TCA (F002), salt sludges (D005), lead pot sludges (D008), quench oil bath sludges (F010), cyanide pot skimmings (F011) and various nonhazardous special wastes.
Release Controls:	This unit was located indoors on a concrete floor.

**History of Documented
Releases:**

Stains on the floor were observed and documented during an IEPA inspection on September 27, 1989. The facility's consultant, MCA, plans to conduct sampling to determine whether or not soil contamination exists in this area. This activity will be done as part of the ongoing RCRA closure for this unit.

Observations:

The unit is no longer operating. The stains observed during the 1989 IEPA inspection have been cleaned up. PRC observed no visual evidence of past release.

4.0 AREAS OF CONCERN

PRC identified 1 AOC during the PA/VSI. This is discussed below.

AOC 1 Pumphouse USTs 1, 2, and 3

The facility used three 10,000-gallon, steel, underground tanks (approximately 30 years old) for storage and recirculation of product quench oil. These tanks are located in the pumphouse along with Tanks 4 and 5, which are water tanks and are not addressed as part of the AOC. Lindberg's environmental consultant, MCA, reported a suspected release from Tanks 1, 2, and 3 to IEPA on September 8, 1989 (Incident No. 891730). On November 17, 1989, the tanks were visually inspected. One-half-inch-diameter holes were found in Tanks 2 and 3, and the tanks were immediately taken out of service. Tank 1 was found to be in good condition, but was taken out of service on December 22, 1989, as a precautionary measure. On February 1, 1990 MCA submitted a work plan for a site assessment to IEPA. The plan was approved by IEPA on March 29, 1990 (MCA, 1990).

Field work for the assessment was conducted from July 9 to July 13, 1990, and on September 6, 1990. Work included collecting soil samples from seven borings, installing five ground-water monitoring wells, and sampling those wells. In December 1990, MCA submitted an assessment report to IEPA's leaking UST unit. The report concluded that a release of quench oil, TCE, and other VOCs had occurred to soil and ground water in an area directly beneath the pumphouse, adjacent to the USTs, and immediately west of the pumphouse, beneath the facility's manufacturing floor. Free-phase quench oil was observed in a perched ground-water table (about 3 feet bps) in the area west of the pumphouse. The oil layer appeared to be about 4 inches thick. Analysis of soil and ground-water samples revealed the following contaminant concentrations:

- Total Petroleum Hydrocarbons (TPH) at 2,280 to 65,300 parts per million (ppm) in soil and 13 to 3346 ppm in ground water
- TCE at 100 to 180,000 parts per billion (ppb) in soil and 2.1 to 41,000 (ppb) in ground water
- Biodegradation products of TCE [Dichloroethene (DCE) and vinyl chloride] at less than 80 to 8600 ppb in soil and 3 to 27,000 ppb in ground water
- 1,1,1-TCA at less than 96 ppb in soil and 38 to 120 ppb in ground water

- Toluene at less than 300 ppb in soil and less than 6 to 22 ppb in ground water

MCA concluded that quench oil contamination was attributed to releases from USTs 2 and 3 and associated underground piping. They also concluded that VOC contamination was most likely due to inadvertent spills from aboveground solvent storage at the facility (MCA, 1990).

MCA proposed to IEPA the following additional investigative activities to further define the extent of quench oil contamination:

1. Install two additional monitoring wells to assist in determining the need for a free-product recovery system.
2. Sample new wells and resample existing wells for TPH.
3. Collect depth data from new wells to aid in determining the site's ground-water flow gradient.
4. Submit another report to IEPA summarizing the results of the above activities.

MCA made no recommendations to further address the VOC contamination at the facility. They claimed that the release is not subject to CERCLA or RCRA reporting requirements, because a reportable quantity of 100 pounds of VOCs within a 24-hour period cannot be confirmed, and because Lindberg is not currently operating as a RCRA treatment, storage, or disposal facility (MCA 1990).

A diagram of this area and tables containing detailed analytical results are included in Attachment D of this report.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified six SWMUs and one AOC at the Lindberg facility. Background information on the facility's location, operations, waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is discussed in Section 3.0. The AOC is discussed in Section 4.0. Following are PRC's conclusions and recommendations for each SWMU and AOC. Table 3 identifies the SWMUs and AOC at the Lindberg facility and suggested further actions.

SWMU 1 Waste Accumulation Area

Conclusions: This unit appears to be structurally sound and operated safely. No evidence of release was noted during the VSI, and the unit has no documented release history. This area is completely enclosed and has a concrete floor. The release potential via all environmental media (ground water, surface water, on-site soil and air) is low.

Recommendations: PRC recommends no further action.

SWMU 2 Satellite Accumulation Areas

Conclusions: During the VSI, evidence of a release was noted near a satellite drum of spent 1,1,1,-TCA. On-site ground-water and soil samples taken in 1990 (in relation to AOC 1) revealed the presence of 1,1,1-TCA. In the 1990 assessment conducted by MCA it was concluded that the VOC contamination discovered in AOC 1 was most likely due to aboveground solvent storage at the facility (MCA, 1990). The material in the salt sludge satellite drums is solid and not likely to migrate. The release potential via specific environmental media is summarized below.

On-Site Soil and Ground Water: The potential for a release from this unit to on-site soils and ground water is moderate. 1,1,1-TCA contamination of these media has already been documented at AOC 1. Soil and ground

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**TABLE 3
SWMU AND AOC SUMMARY**

	<u>SWMU</u>	<u>Operational Dates</u>	<u>Evidence of Release</u>	<u>Suggested Further Action</u>
1.	Waste Accumulation Area	1989 - Present	None	No further action.
2.	Satellite Accumulation Areas	1952 - Present	PRC observed absorbent material being used to treat a spill on the floor surrounding a drum of 1,1,1-TCA.	Provide secondary containment for 1,1,1-TCA satellite drum.
3.	Oil-Water Separators	1952 - Present	Solvent odor detected in final bay of the south separator during the VSI	Sample material in south separator for VOCs and inspect the separator and associated drains and piping for structural defects.
4.	Dust Collectors	Mid-1950s - Present	Releases of dust observed on floor surrounding collectors	No further action.
5.	Former Wastewater Treatment System	1952 - 1989	None	No further action.
6.	Former Container Storage Area	1952 - 1989	Stains on the floor were observed during a September 27, 1989, IEPA inspection.	No further action other than those proposed by MCA to determine existence of contamination as part of RCRA closure.

TABLE 3
SWMU AND AOC SUMMARY (Continued)

<u>AOC</u>	<u>Operational Dates</u>	<u>Evidence of Release</u>	<u>Suggested Further Action</u>
1. Pumphouse USTs 1, 2, and 3	late 1950s - 1989	Release of quench oil and VOCs confirmed during 1990 site assessments	Proceed with actions proposed to IEPA to address quench oil contamination; resample soil and ground water to determine current status of VOC contamination; submit results to IEPA and EPA to determine the need for further corrective action.

water may still be affected by past or current spills, because a spill was observed in this unit during the VSI.

Surface Water: The potential for a release from this unit to surface water is low. Releases from this unit are not expected to impact nearby surface water. The on-site presence of perched ground water and subsurface clay would limit the ability of contaminants to migrate off site to nearby surface water.

Air: The potential for a release from this unit to air is low. The unit is located indoors and is completely enclosed.

Recommendation: PRC recommends that secondary containment such as a small berm or curb be installed around the 1,1,1-TCA drum to prevent migration of spilled material.

SWMU 3

Oil-Water Separators

Conclusions: During the VSI, PRC detected a solvent odor in the final bay and the sanitary sewer discharge point of the south separator. Material spilled inside the facility (such as 1,1,1-TCA from SWMU 2) may have flowed into a floor drain that emptied into this separator. The overall structural integrity of the separators could not be determined during the VSI, because the separator bays were not empty. If cracks are present in the walls of the separator bays, VOCs which are already known to exist in subsurface soil and ground water could have flowed into or out of this unit. This unit poses a potential for release to the sanitary sewer. The release potential via specific environmental media is summarized below:

On-Site Soil and Ground Water: The potential for a release from this unit to on-site soils and ground water is moderate. If cracks exist in the separator bays they would create a pathway for migration of contaminants both into and out of this unit.

Surface Water: The potential for a release from this unit to surface water is low. Releases from this unit are not expected to migrate to nearby surface water. The presence of perched ground water and subsurface clay

would limit the ability of contaminants to migrate off-site to nearby surface water.

Air: Because PRC detected solvent odors during the VSI, it appears that a release to air has already occurred.

Recommendations: PRC recommends that the facility sample the material in the final bay and the sanitary sewer discharge point of the south separator and have it analyzed for VOCs. The facility should also visually inspect the entire separator for cracks and other structural defects. Floor drains leading to the separator should also be inspected to determine whether or not they are receiving material from spills inside the facility.

SWMU 4 Dust Collectors

Conclusions: The dust collection systems are completely enclosed, except for the containers that receive dust leaving the system. During the VSI, PRC observed releases of dust on the floor of these areas. The material released is insoluble and nonhazardous. The dust collectors are located indoors on a concrete floor. Therefore, the release potential via all environmental media (including air) is low.

Recommendations: PRC recommends no further action.

SWMU 5 Former Wastewater Treatment System

Conclusions: This unit no longer exists. IEPA approved RCRA closure in 1989. This unit has no documented release history, and PRC observed no evidence of past releases during the VSI. The release potential via all environmental media is low.

Recommendations: PRC recommends no further action.

SWMU 6 Former Waste Container Storage Area

Conclusions: This unit is currently not operating. IEPA has not yet approved RCRA closure because stains were observed on the floor during a September 27, 1989 inspection. As stated in Section 3.0, Lindberg's consultant (MCA)

plans to sample the soil beneath the floor as part of RCRA closure activities. The release potential via specific environmental media is summarized below.

On-Site Soil & Ground Water: The potential for a past release from this unit to impact on-site soil or ground water is moderate. Evidence of past releases was observed in a 1989 IEPA inspection.

Surface Water: The potential for a past release from this unit to impact surface water is low. Contaminants at this SWMU are not expected to migrate to nearby surface water. The on-site presence of perched ground water and subsurface clay would limit the ability of contaminants to migrate off-site to nearby surface water.

Air: The potential for a past release from this unit to impact air is low. Wastes formerly stored in this unit were adequately enclosed.

Recommendation: Because soil sampling will be conducted as part of RCRA closure activities, PRC recommends no further action at this time.

AOC 1 Pumphouse USTs 1, 2, and 3

Conclusions: As stated in Section 4.0 of this report, releases to on-site soil and ground water have already been observed and documented. The potential for a release to surface water is low, due to the geological features of the site. The presence of perched ground water and subsurface clay would limit the ability of contaminants to migrate off site to nearby surface waters. The potential for release to air is low, because contamination is confined to subsurface media.

Recommendation: No further action is recommended to address quench oil contamination because corrective actions have already been proposed and will begin when approved by IEPA. To address possible VOC contamination, PRC recommends that soil and ground water be resampled to determine the current status of VOC contamination. The results of the samples should then be submitted to IEPA and EPA to determine the need for further corrective action.

approved by IEPA. To address possible VOC contamination, PRC recommends that soil and ground water be resampled to determine the current status of VOC contamination. The results of the samples should then be submitted to IEPA and EPA to determine the need for further corrective action.

REFERENCES

- Federal Emergency Management Agency (FEMA), 1981. Flood Plain Maps.
- Illinois Environmental Protection Agency (IEPA), 1985a. RCRA Inspection Report, August 6.
- IEPA, 1985b. Letter regarding violations cited during August 6 inspection, September 24.
- IEPA, 1989a. Closure Approval Letter for Treatment Unit and Storage Tank, March 27.
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- IEPA, 1991. Air Pollution Control Operating Permit No. 031186AAMP, April 1.
- Illinois State Geological Survey, 1940 - 1944. Well Logs for Melrose Park Area.
- Lindberg Heat Treating Company (Lindberg), 1985. Closure Plan for Treatment Unit, Container Storage Unit, and Storage Tank, October 8.
- Mabbett, Capaccio, and Associates (MCA), 1990. Underground Storage Tank Assessment Report, December 7.
- Metropolitan Water Reclamation District of Greater Chicago. (MWRDGC), 1991. User Charge Annual Certified Statement, January 18.
- U.S. Department of Commerce (U.S. DOC), 1980. Statistical Abstract of the United States.
- U.S. Environmental Protection Agency (U.S. EPA), 1980. Notification of Hazardous Waste Activity, Lindberg Heat Treating Company, August 14.
- U.S. EPA, 1982a. Part A Permit Application for Lindberg, April 19.
- U.S. EPA, 1982b. Complaint, Docket No. V-W-83-R-001, October 13.
- U.S. EPA 1982c. Consent Agreement and Final Order, Docket No. V-W-R-001, November 18.
- U.S.G.S., 1991. Figure 1.

ATTACHMENT A
EPA PRELIMINARY ASSESSMENT FORM 2070-12



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE ILD 02 SITE NUMBER 005 071 808

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Lindberg Heat Treating Company	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 1975 North Ruby Street
03 CITY Melrose Park	04 STATE IL 05 ZIP CODE 60160 06 COUNTY Cook 07 COUNTY CODE 08 CONG DIST
09 COORDINATES: LATITUDE 87 52 25.0 LONGITUDE 041 54 20.0	
10 DIRECTIONS TO SITE (Starting from nearest public road) RT 64 (North Avenue West to Ruby Street)	

III. RESPONSIBLE PARTIES

01 OWNER (if known) Lindberg Heat Treating Company	02 STREET (Business, mailing, residential) 8600 W. Bryn Mar
03 CITY Chicago	04 STATE IL 05 ZIP CODE 60631 06 TELEPHONE NUMBER (312)
07 OPERATOR (if known and different from owner) Lindberg Heat Treating Company	08 STREET (Business, mailing, residential) 1975 North Ruby Street
09 CITY Melrose Park	10 STATE IL 11 ZIP CODE 60160 12 TELEPHONE NUMBER (708) 344-4080
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER (Specify) <input type="checkbox"/> G. UNKNOWN	
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3010 DATE RECEIVED: 08/18/80 MONTH DAY YEAR <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / / MONTH DAY YEAR <input type="checkbox"/> C. NONE	

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 08/21/91 <input type="checkbox"/> NO	BY (Check all that apply) <input checked="" type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: (Specify) CONTRACTOR NAME(S): PRC Environmental Management Inc.
02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	03 YEARS OF OPERATION 1952 Present BEGINNING YEAR ENDING YEAR <input type="checkbox"/> UNKNOWN
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Quench oil, VOCs, salt sludges, process dust	
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Quench oil and VOC contamination have been observed and documented in a site assessment conducted by facility's environmental consultant.	

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)			
<input type="checkbox"/> A. HIGH (Inspection required promptly)	<input checked="" type="checkbox"/> B. MEDIUM (Inspection required)	<input type="checkbox"/> C. LOW (Inspect on time-available basis)	<input type="checkbox"/> D. NONE (No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Kevin Pierard	02 OF (Agency/Organization) U.S. Environmental Protection Agency Region V	03 TELEPHONE NUMBER (312) 886-4448		
04 PERSON RESPONSIBLE FOR ASSESSMENT Mary Wojciechowski	05 AGENCY	06 ORGANIZATION PRC EMI	07 TELEPHONE NUMBER (312) 856-8700	08 DATE 09/18/91 MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
ILD 005 071 808

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

02 ☒ OBSERVED (DATE: 9/6/90)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: None

04 NARRATIVE DESCRIPTION

On-site groundwater contamination discovered during an underground storage tank assessment. Primary contaminants are quench oil and VOCs. Groundwater is not used for any purposes in the area.

01 ☒ B. SURFACE WATER CONTAMINATION

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 20,700

04 NARRATIVE DESCRIPTION

Very low potential of off site contaminant migration due to site geology.

01 ☒ C. CONTAMINATION OF AIR

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 20,700

04 NARRATIVE DESCRIPTION

Very low potential of air contamination. All solid waste management units are adequately enclosed. All contamination is restricted to the subsurface.

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 20,700

04 NARRATIVE DESCRIPTION

Very low potential. No flammables or explosive materials handled.

01 ☒ E. DIRECT CONTACT

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 80

04 NARRATIVE DESCRIPTION

Very low potential. Types and amounts of materials handled would pose a threat.

01 ☒ F. CONTAMINATION OF SOIL

02 ☒ OBSERVED (DATE: July 9-13, 1990)

☐ POTENTIAL

☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: .05
(Acres)

04 NARRATIVE DESCRIPTION

On-site soil contamination discovered during an underground storage tank assessment. Primary contaminants are quench oil and VOCs

01 ☒ G. DRINKING WATER CONTAMINATION

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 20,700

04 NARRATIVE DESCRIPTION

Very low potential. All drinking water supplied by Lake Michigan.

01 ☒ H. WORKER EXPOSURE/INJURY

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: 80

04 NARRATIVE DESCRIPTION

Very low potential. Types and amounts of materials handled would pose a threat.

01 ☒ I. POPULATION EXPOSURE/INJURY

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 20,700

04 NARRATIVE DESCRIPTION

Very low potential. Types and amounts of materials handled would pose a threat.



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE IL	02 SITE NUMBER 005 071 808

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very low potential. All contamination limited to on-site subsurface.

01 ☒ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

Very low potential. All contamination limited to on-site subsurface.

01 ☒ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very low potential. All contamination limited to on-site subsurface.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE: 8/21/91) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Spill of TCA observed

01 ☒ N. DAMAGE TO OFF-SITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Low potential; contaminants not likely to migrate.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very high potential; solvent odor detected on August 21, 1991 in final bay of oil-water separator that discharges to the sanitary sewer.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very low potential. No evidence of illegal activity.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 20,700

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references; e.g., state files, sample analysis, reports)

U.S. EPA Region V files and Illinois EPA files

ATTACHMENT B
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

**Lindberg Heat Treating Company
Melrose Park, IL
ILD 005 71 808**

Date: August 21, 1991

Facility Representatives: Bob Schalek - Plant Manager
Roger Lupien - Division Manager
Harry Schieder - Engineering Manager
Stephen Sakakeeny - Mabbett, Capaccio, and Associates

Inspection Team: Mary Wojciechowski - PRC
Laurel Berman - PRC

Photographer: Laurel Berman

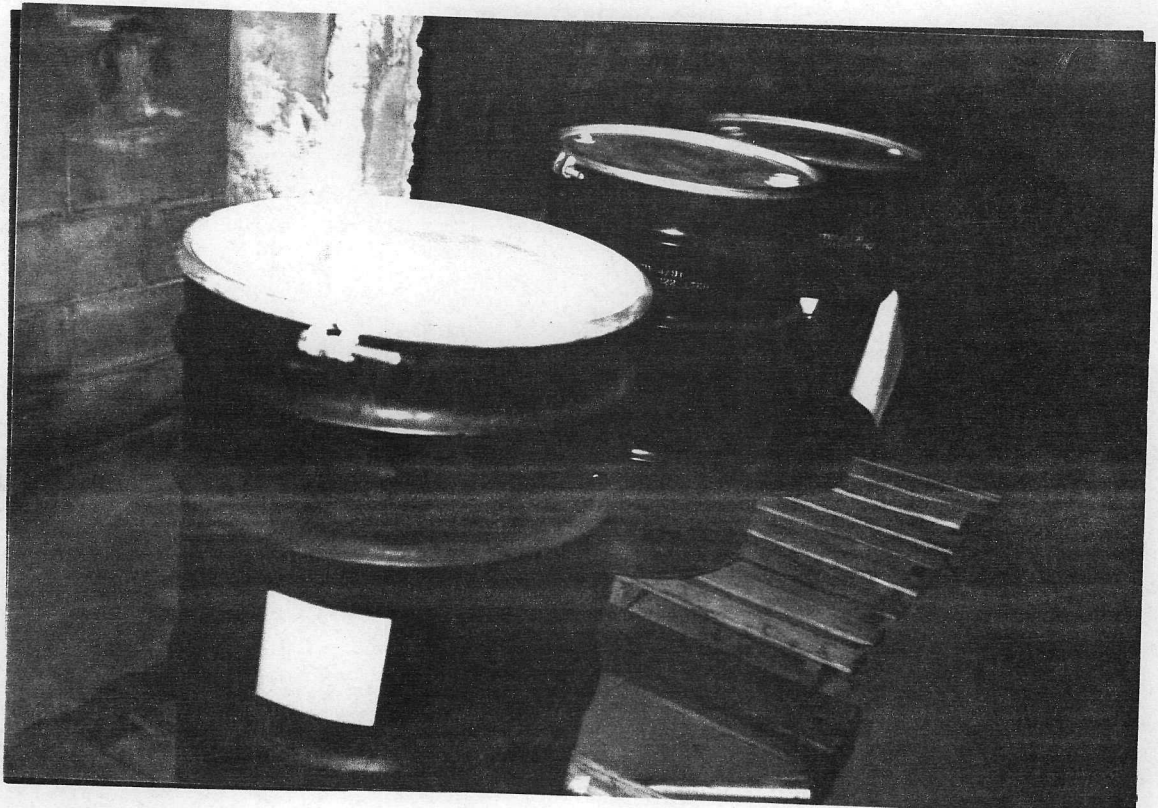
Weather Conditions: Sunny, 90°F

Summary of Activities: The VSI began at 9:00 am. PRC representatives explained the scope and purpose of the inspection. Process and waste handling information was obtained from facility representatives. The site tour began at 10:45 am. All 6 SWMUs and one AOC were viewed during the tour. The VSI ended at 12:00 pm.



Photograph No. 1
 Orientation: North
 Description: Waste accumulation area

Location: SWMU 1
 Date: 08/21/91



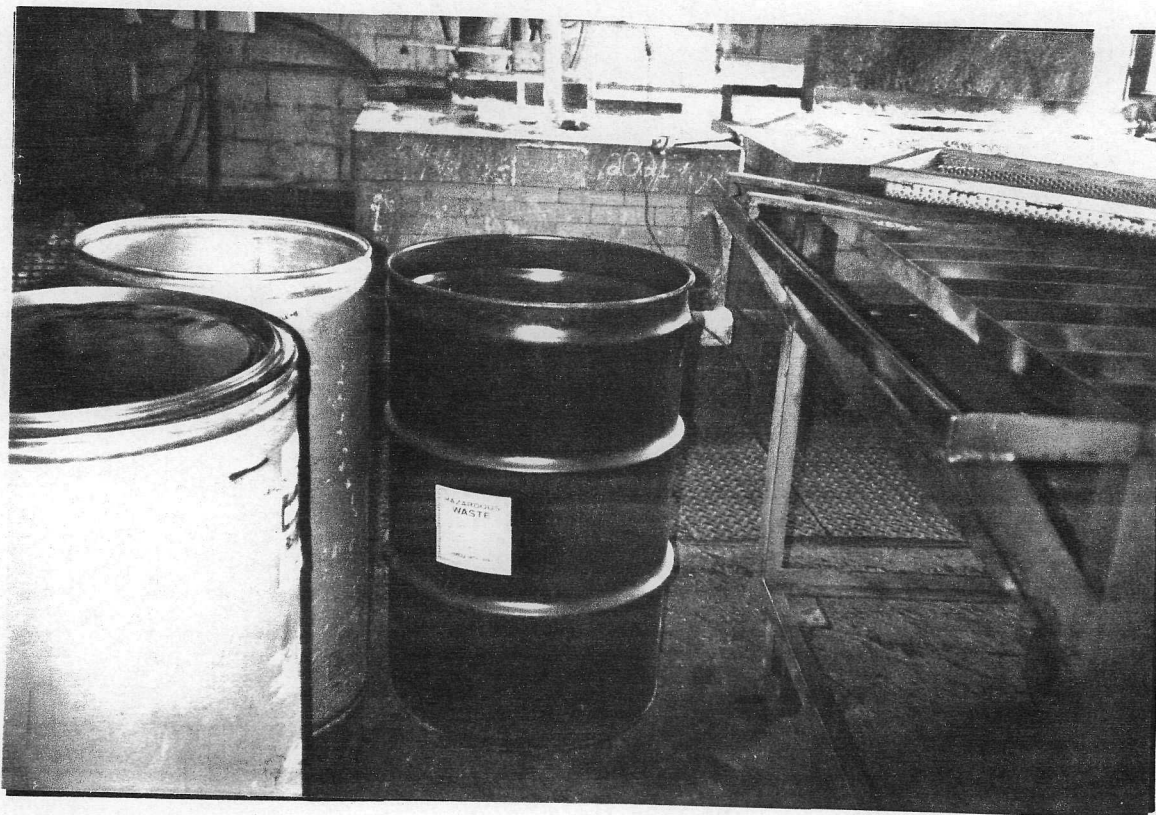
Photograph No. 2
 Orientation: Closeup
 Description: Waste accumulation area

Location: SWMU 1
 Date: 08/21/91



Photograph No. 3
 Orientation: East
 Description: 1,1,1-TCA Satellite accumulation drum

Location: SWMU 2
 Date: 08/21/91



Photograph No. 4
 Orientation: Closeup
 Description: Salt sludge satellite accumulation drum

Location: SWMU 2
 Date: 08/21/91



Photograph No. 5
 Orientation: Closeup
 Description: Salt sludge satellite accumulation drum

Location: SWMU 2
 Date: 08/21/91



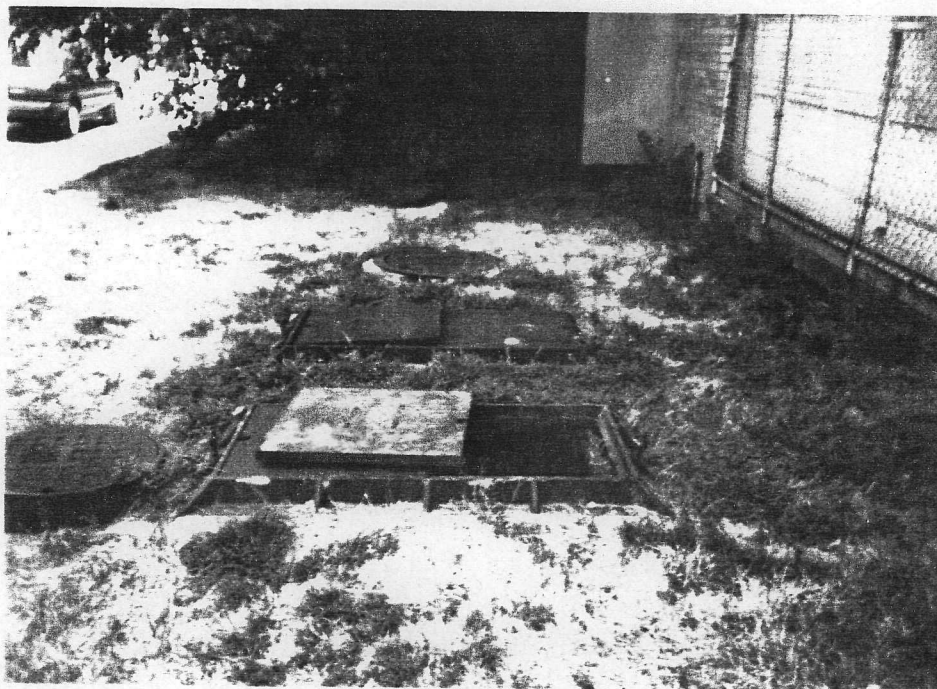
Photograph No. 6
 Orientation: Closeup
 Description: Salt sludge satellite accumulation area

Location: SWMU 2
 Date: 08/21/91



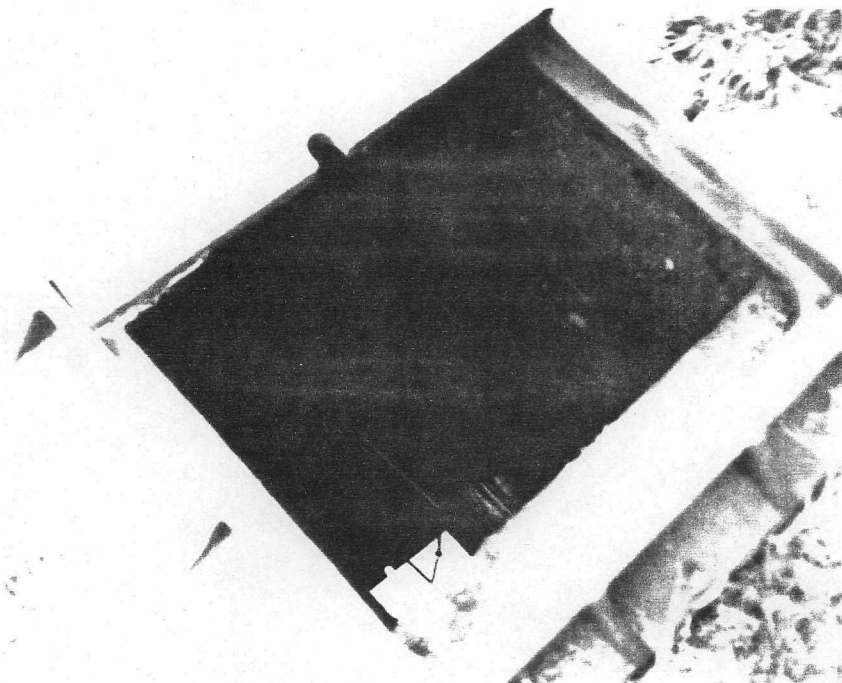
Photograph No. 7
 Orientation: Closeup
 Description: Pipe and floor drain leading to oil-water separator

Location: SWMU 3
 Date: 08/21/91



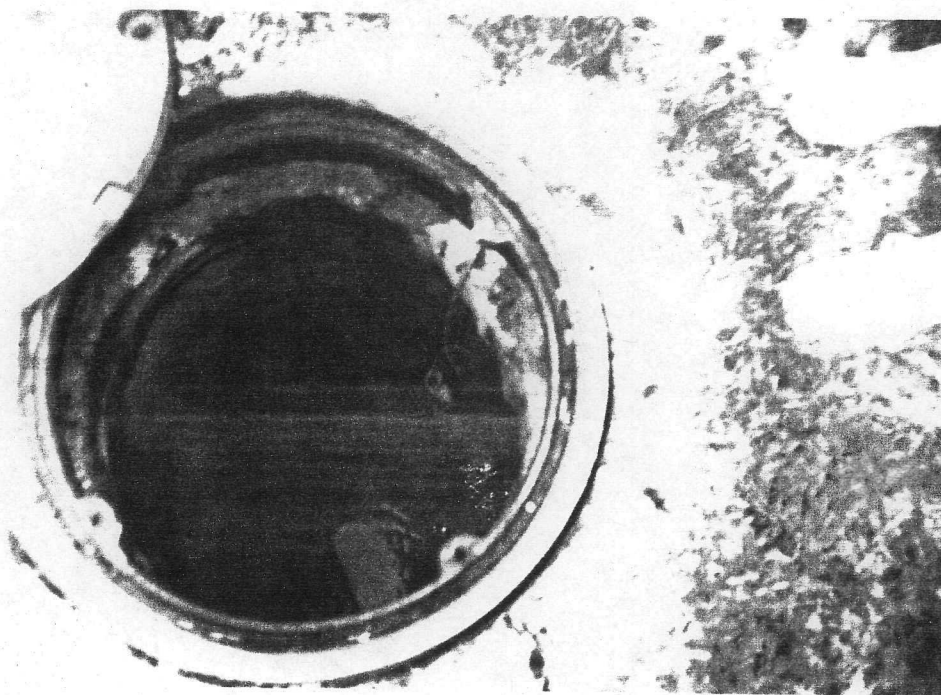
Photograph No. 8
 Orientation: North
 Description: South oil-water separator

Location: SWMU 3
 Date: 08/21/91



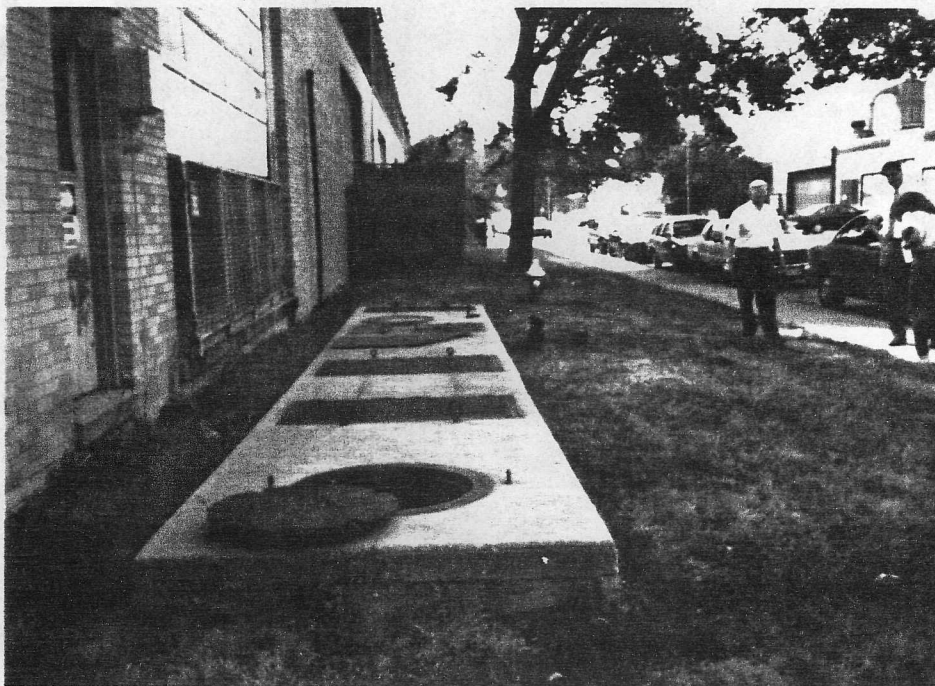
Photograph No. 9
Orientation: Closeup
Description: Final bay of south oil-water separator

Location: SWMU 3
Date: 08/21/91



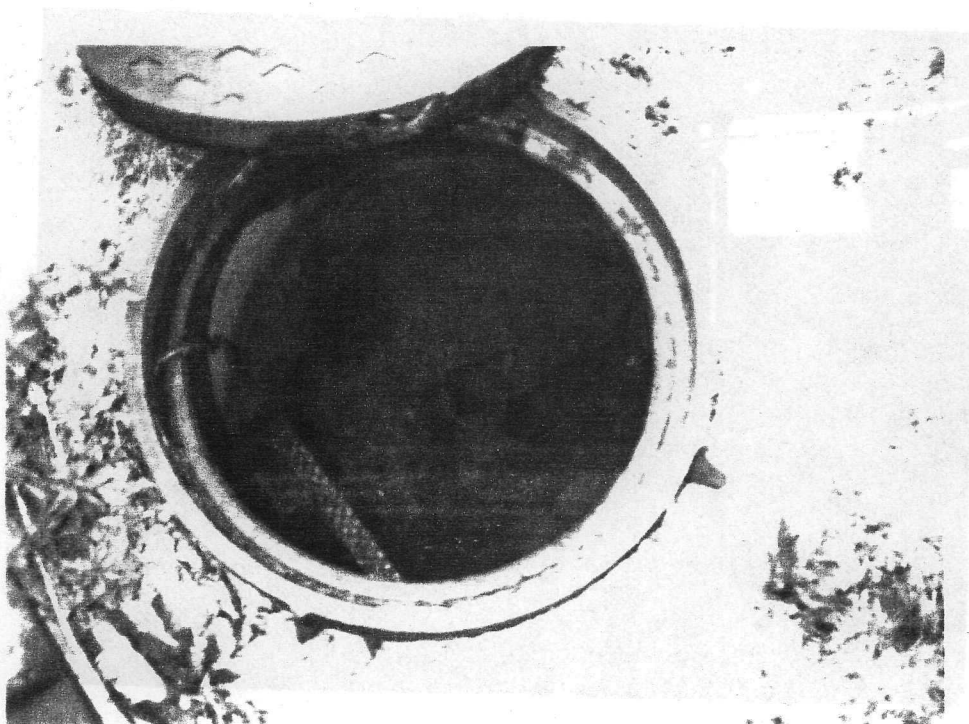
Photograph No. 10
Orientation: Closeup
Description: Effluent discharge point for south oil-water separator

Location: SWMU 3
Date: 08/21/91



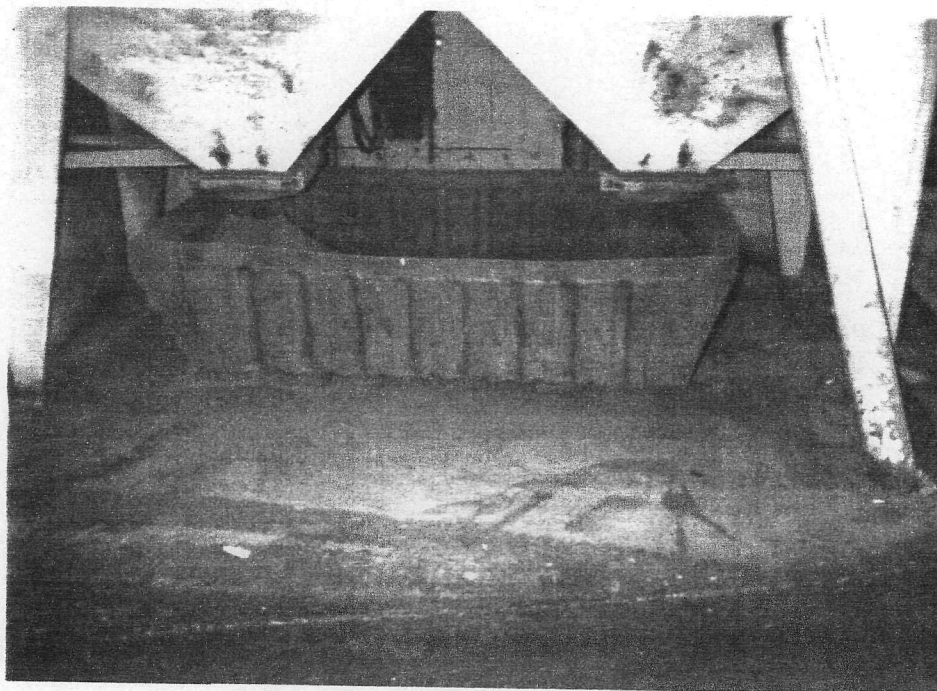
Photograph No. 11
 Orientation: South
 Description: North oil-water separator

Location: SWMU 3
 Date: 08/21/91



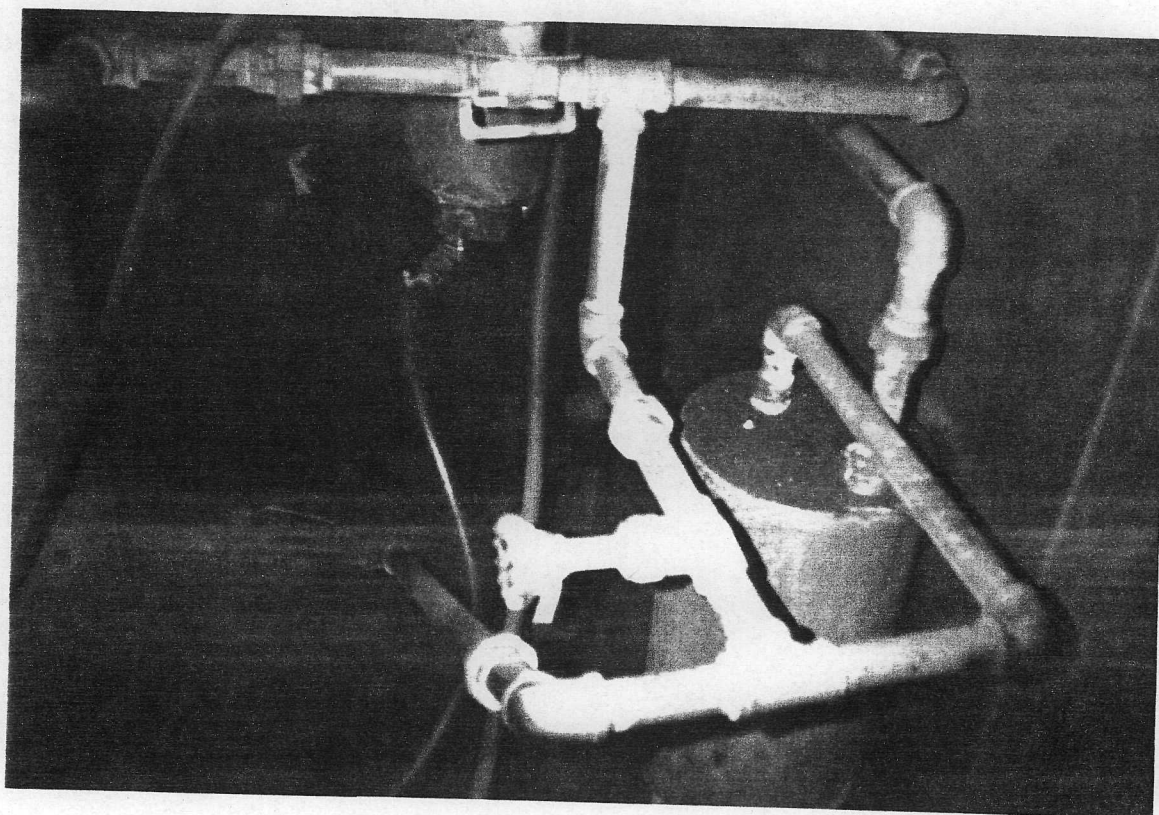
Photograph No. 12
 Orientation: Closeup
 Description: Effluent discharge point for north oil-water separator

Location: SWMU 3
 Date: 08/21/91



Photograph No. 15
 Orientation: Closeup
 Description: Steel shot dust collector

Location: SWMU 4
 Date: 08/21/91



Photograph No. 16
 Orientation: Closeup
 Description: Aluminum oxide dust collector; note the cardboard box on the floor of the unit.

Location: SWMU 4
 Date: 08/21/91



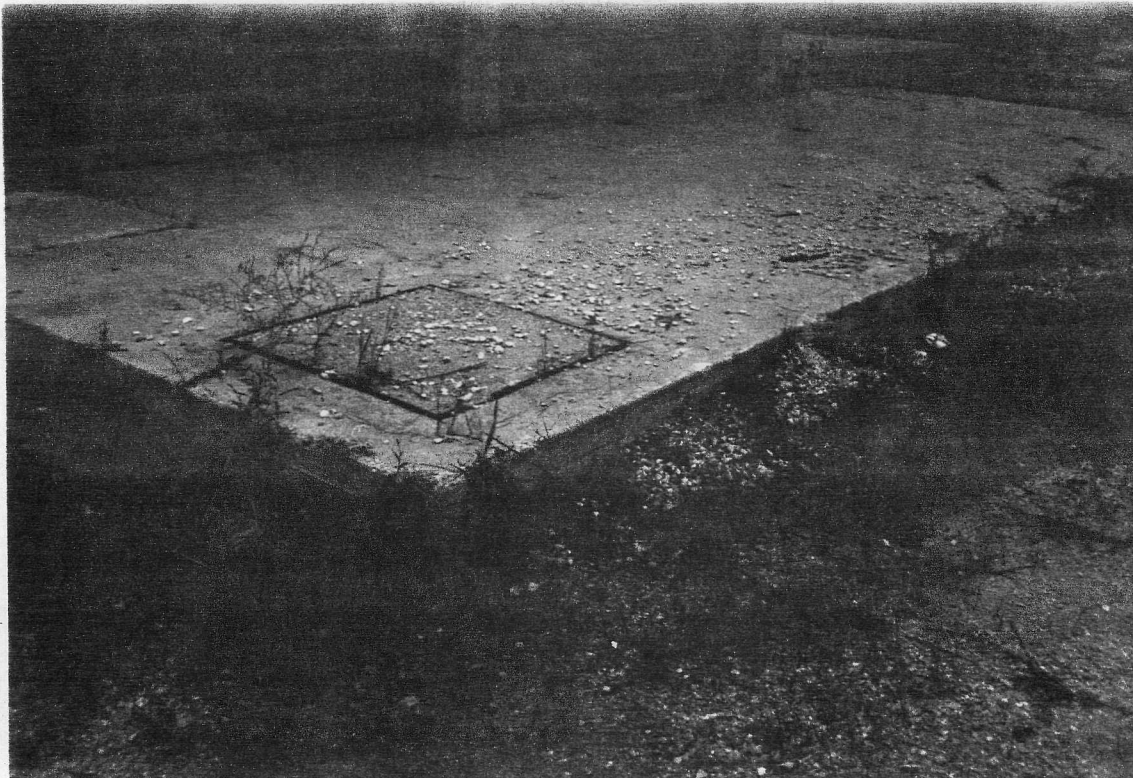
Photograph No. 17
Orientation: Closeup
Description: Aluminum oxide dust collector

Location: SWMU 4
Date: 08/21/91



Photograph No. 18
Orientation: Closeup
Description: Aluminum oxide dust collector

Location: SWMU 4
Date: 08/21/91



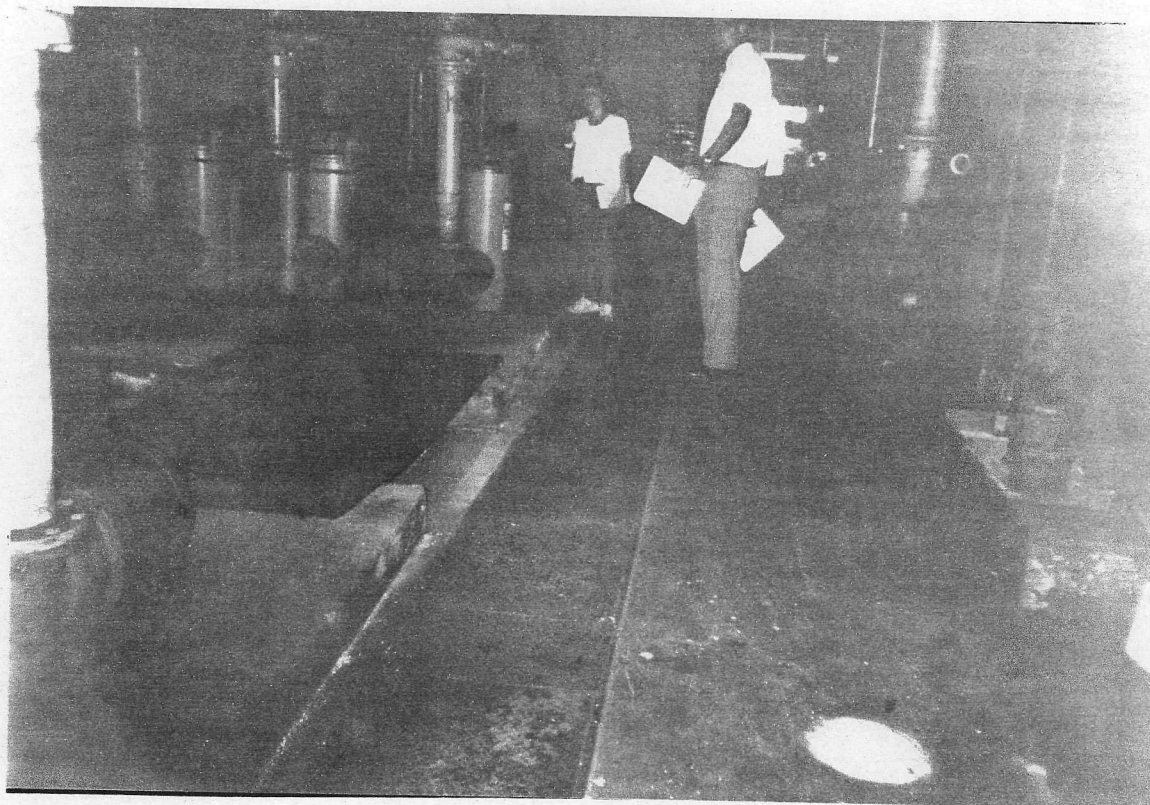
Photograph No. 19

Orientation: Northwest

Description: Former location of storage tank associated with the former wastewater treatment system

Location: SWMU 5

Date: 08/21/91



Photograph No. 20

Orientation: East

Description: Pump house underground storage tanks

Location: AOC

Date: 08/21/91

ATTACHMENT C
VISUAL SITE INSPECTION FIELD NOTES

①

LINDBERG
HEAT TREATING
August, 21, 1941
9⁰⁰ Am - 12⁰⁰ pm

Mary C. Wapichinski

(2)

Ht treat metal
25000 sq ft of mfg area
+ get larger copy of map
~ 10-12 Areas of Property
1952

T Ba sludge

+ TCE - no degreasing
Tusstride soln gone
lead

CN soln & quench H₂O gone
quench oil

G, < 90 days

→ Parts ~~is~~ ~~or~~ dipped
into drums

MCA - involved in closure

- IEPA set clean up
objectives

- repropose sampling
plan

- Fax clean up stds

(3)

extension to spring of Q2.

- Pumphouse adj to sd.
now used for waste

- LUST

- 5 tanks in Pumphouse

- initial site assessment
completed

borings

monitoring wells

all 5 out of commission

~~very~~ quench oil

for used in

central cooling
system

4 & 5 water

1, 3 - quench oil

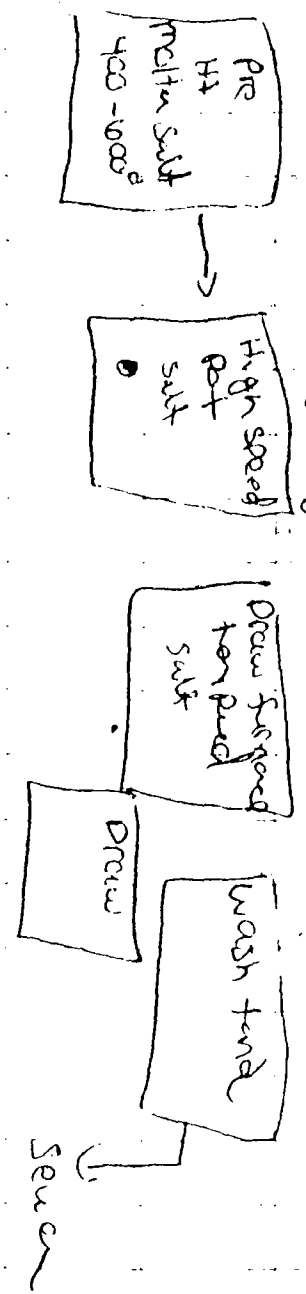
2 - empty

- well pt system installed
(drew water)

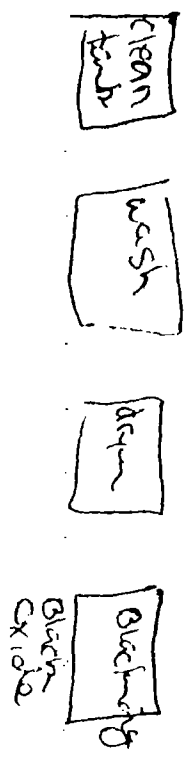
- to minimize corrosion

5

3a High speed salt line



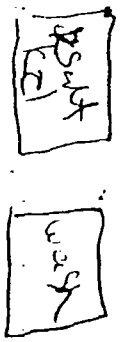
~~Process~~ Process development line



- ① + discovered ICE in soil + groundwater
- + need copy of assent
- 76 employees
- 3 shifts 5 days/week

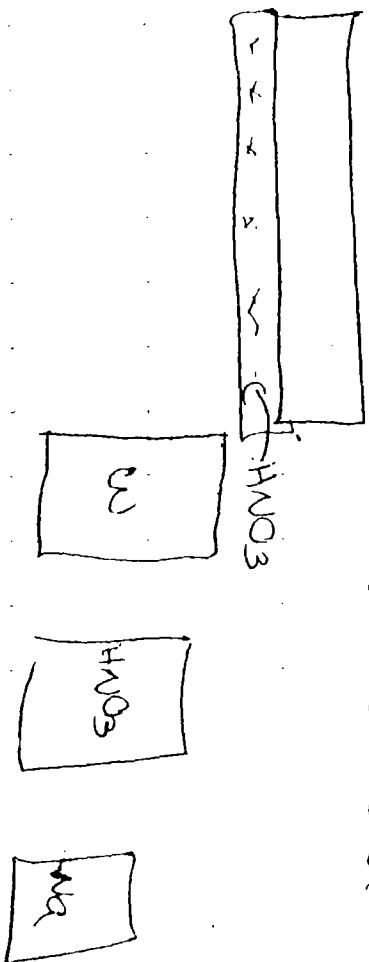
PROCESS INFO

Neutral Salt line



①

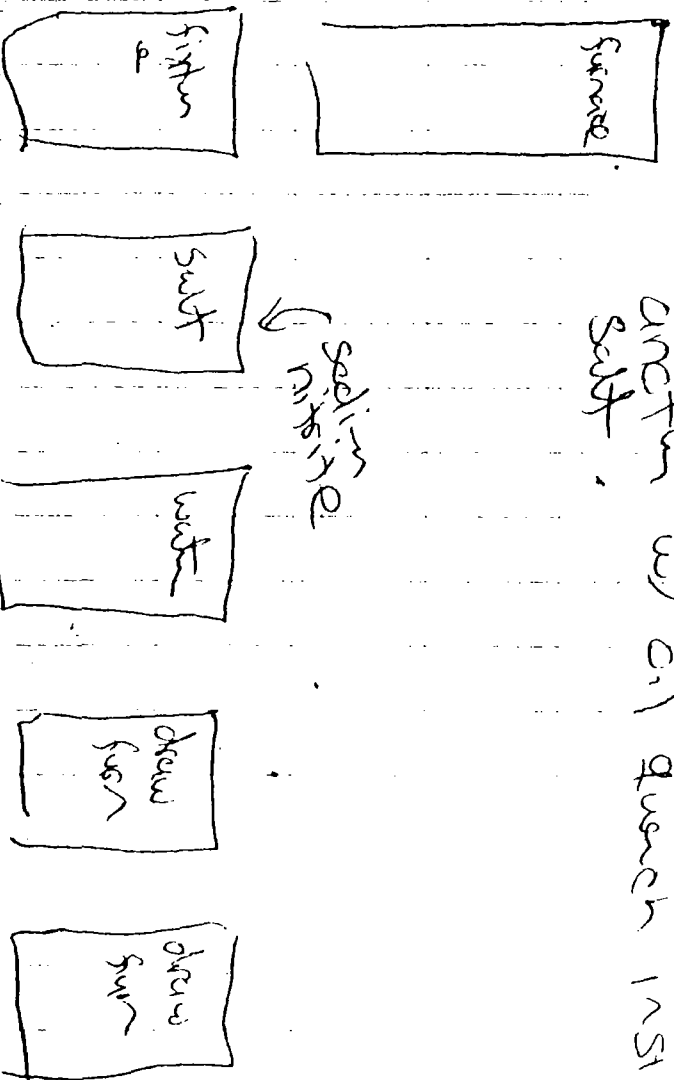
nitric acid



degreasing \rightarrow for gas nitrating
not regular basis

② Gasify furnace

another w/ oil quench instead of salt



urban
areospace
agriculture
defense

customs

- all other sludges mixed together & handled as Ba sludge (DOOS)
- 3 oil separators
wash water goes to oil sep
- hauler cleans out oil sep every couple months
- gravity sep
- Discharge to MSPGC
water from separators
- some slow drains lead to separators
- Plant sewer system

Common gas fired furnace
quench & wash

electric heat treating in a vacuuming

nitriding - gas processes, furnace

3 oil case furnace

oil

case

furnace

- for some water
- oil sludge
- TCE

J manifests for 91

CN gone for ~ 2 yrs
Tufftride line - used

CN's
↳ stopped spring of 87

- 1 Pump House MCC
- 2 Sol former
- 3 Sol former
- 4 ~~TOI~~

1 TOI form

5 (3) oil sops

6 Parts clean - main shop

SO2 - concrete tank
untreated
for waste water

Storage by treatment

- effluent to sanitary
sewer

Air Poln permits

renew - 4 pieces of
equip new.
state.

SK Parts Wash Naptha

↳ take out by SK.

(12) Manifest

Oil sludge

950 gal

1200 gal

b4 to Motor Oils Refining
Co in McCook

Ba Salt

6335 P (13 dm)

6240 P (13 dm)

Chem-Met Services

Wyandotte Mi

by Onzing Transport
System

treatment (?)

neutralize

vacc filter

residues buried

Xerox Manifest tables

MSD effluent analysis

(13)

- Air Emissions

- dust collectors in
shot blast area

baghouse (OP Permit)

dust → ? ^{Attracting} LE

non Haz special waste

Ba - discharged to
sanitary MSD

~ 100 ppm

Nitrates

Salt line Plugged

- ① ✓ ~~Proposed~~ ^{Current} Acc.
 ② ③ oil separator
 ③ Baghouse in Shotblast
 ④ former Sol.
 ⑤ tank Sol.
 ⑥ WWT Tol
 ⑦ Parts washers in maint.
 ⑧ Acc UGT
 ⑨ ✓ Satellite Acc? is any
 ⑩ ✓ TCE - dip drums

Silver Creek - 1/2 blk east
 receives storm
 water

- manifest charts
- bigger map
- IEPA Clean up stals
- Site Assessment
- current APC permits
- MSD am rpt.

(10)
 glass bead } handled in
 steel shot } baghouses

Air Permits - got copies

(1)

satellite acc

- in Ba Area

2 drums 1 for
each side.

• Natural salt.

Tol, Soc - ~ 1974

WW - going down
sewer by 74

- Contain storage since RRA

Program

current acc.

Small room → rm where
treatment system used to
be

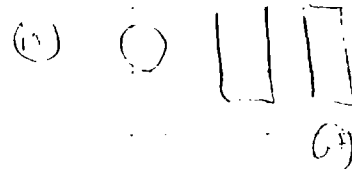
- whole property fenced

(12)

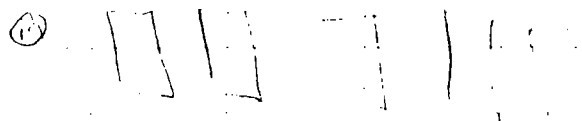
Quench oil a (filtering) - 165 gal

to Altrachem - filter →
separated w/ clean oil

(1) South oil sep



(2) N oil sep



(2) flow tank ()

(3) oil tank

(18)

(5) 2 dr tric dip

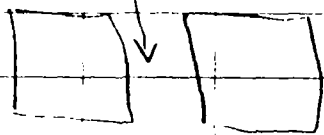
(6) Pump house

5 units

1-4 1000 gal

5 8000 gal

(7) Oil $\frac{200}{100}$ Blt



Plc or Gravel

10
Ruby
St

(8) Scholite Acc

Bar & metal solid

Tail & Die Blt

(9) glass beat dust

Boilhouse

Cydon

ax

7C down

fused Aluminum Oxide

carry water from
in Sumner

(19)

(10)

20 soil bearings taken by
Heritage

(11) curved Acc

(12) unit 500

now filled in w/ concrete

Property owner

Lindberg Corp.

6133 n River Rd

Rosemount, FL 34418

708-823-2021

1000 gal - PDC

4000 gal - N

2000 gal - S

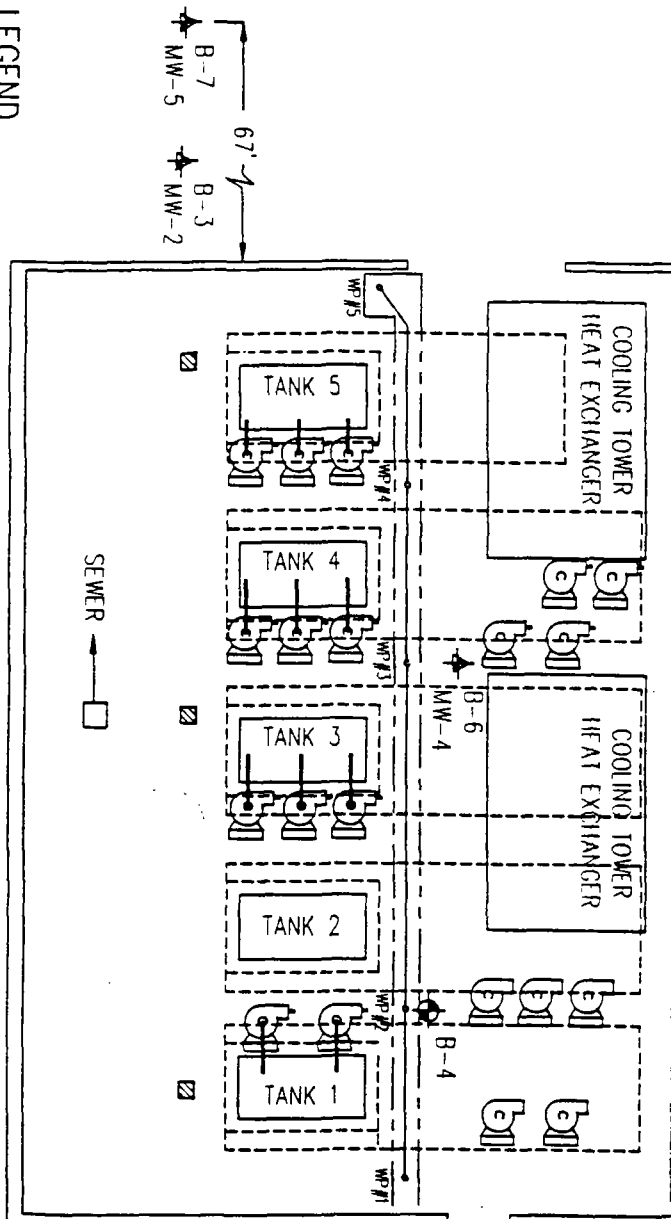
lined w/ concrete

ATTACHMENT D

**ANALYTICAL INFORMATION FOR THE PUMPHOUSE
UNDERGROUND STORAGE TANKS (USTs) 1, 2, and 3 (AOC 1)**

LEGEND

WP - WELL POINT
 B - BORING LOCATIONS
 MW - MONITORING WELL LOCATION



LINDBERG HEAT TREATING CO. MELROSE PARK, ILLINOIS	SAMPLE LOCATION PLAN FIGURE I-3		DWG NO. L-2
MCA MABBETT CAPACCIO & ASSOCIATES, INC. CONSULTANTS AND ENGINEERS <small>5 Alfred Circle, Bedford, Massachusetts 01730</small>	SCALE: 1/8"=1'-0" DATE:	DR BY: HSW AP BY:	PROJ NO. 37024.03

TABLE 3
SUMMARY OF LABORATORY RESULTS

LINDBERG HEAT TREATING COMPANY
1975 N.RUBY STREET, MELROSE PARK, IL
PROJECT NUMBER 87024.03

I. TOTAL PETROLEUM HYDROCARBON ANALYSES: EPA METHOD 418.1

B/MW LOCATION	SOIL SAMPLE DEPTH (ft)	GROUNDWATER (mg/L)	SOIL (mg/L)
B-1(MCA-1)	3-5	LT 0.5	LT 40
B-2	5-7	NA	11,800
B-3(MCA-2)	5-7	3,346(1)	2,280
B-4	3-5	NA	65,300
B-5(MCA-3)	ALL DEPTHS	LT 0.5	LT 40
B-6(MCA-4)	11-13	13	4,180
B-7(MCA-5)	3-5	NA	LT 40

Lindberg Heat Treating Company
87024.03

December 1990
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TABLE 3
SUMMARY OF LABORATORY RESULTS

LINDBERG HEAT TREATING COMPANY
1975 N.RUBY STREET, MELROSE PARK, IL
PROJECT NUMBER 87024.03
(Continued)

II. VOLATILE ORGANIC ANALYSIS: DETECTED COMPOUNDS BY EPA METHOD 624/8240

WELL LOCATION	SOIL SAMPLE DEPTH (ft)	CHEMICAL COMPOUND	GROUNDWATER (ug/L)	SOIL (ug/L)
B-1 (MCA-1)	3-5	1,1-DICHLOROETHANE	LT 4.7	LT 235
		TETRACHLOROETHENE	LT 4.1	LT 205
		1,2-DICHLOROETHANE	LT 2.8	LT 140
		1,1,1-TRICHLOROETHANE	LT 3.8	LT 190
		TOLUENE	LT 6.0	LT 300
		VINYL CHLORIDE	LT 6.5	LT 325
		TRANS 1,2-DICHLOROETHENE	3.0	LT 80
		CIS 1,2-DICHLOROETHENE	88	LT 80
		TRICHLOROETHENE	2.1	LT 95
B-2	5-7	1,1-DICHLOROETHANE	NA	LT 235
		TETRACHLOROETHENE	NA	LT 205
		1,2-DICHLOROETHANE	NA	LT 140
		1,1,1-TRICHLOROETHANE	NA	LT 190
		TOLUENE	NA	LT 300
		VINYL CHLORIDE	NA	LT 325
		TRANS 1,2-DICHLOROETHENE	NA	LT 80
		CIS 1,2-DICHLOROETHENE	NA	LT 80
		TRICHLOROETHENE	NA	100

Lindberg Heat Treating Company
87024.03

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TABLE 3
ANALYTICAL SUMMARY

LINDBERG HEAT TREATING COMPANY
1975 N.RUBY STREET, MELROSE PARK, IL
PROJECT NUMBER 87024.03
(Continued)

II. VOLATILE ORGANIC ANALYSIS: DETECTED COMPOUNDS BY EPA METHOD 624/8240

WELL LOCATION	SOIL SAMPLE		GROUNDWATER (ug/L)	SOIL (ug/L)
	DEPTH (ft)	CHEMICAL COMPOUND		
B-3 (MCA-2)	5-7	1,1-DICHLOROETHANE	LT 23.5	LT 235
		TETRACHLOROETHENE	LT 20.5	LT 205
		1,2-DICHLOROETHANE	LT 14	LT 140
		1,1,1-TRICHLOROETHANE	38	LT 190
		TOLUENE	LT 30	LT 300
		VINYL CHLORIDE	LT 32.5	LT 325
		TRANS 1,2-DICHLOROETHENE	LT 8	LT 80
		CIS 1,2-DICHLOROETHENE	LT 8	LT 80
		TRICHLOROETHENE	11	230
B-4	3-5	1,1-DICHLOROETHANE	NA	NA
		TETRACHLOROETHENE	NA	NA
		1,2-DICHLOROETHANE	NA	NA
		1,1,1-TRICHLOROETHANE	NA	NA
		TOLUENE	NA	NA
		VINYL CHLORIDE	NA	NA
		TRANS 1,2-DICHLOROETHENE	NA	NA
		CIS 1,2-DICHLOROETHENE	NA	NA
		TRICHLOROETHENE	NA	NA

Lindberg Heat Treating Company
87024.WK1

December 1990
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TABLE 3
ANALYTICAL SUMMARY

LINDBERG HEAT TREATING COMPANY
1975 N.RUBY STREET, MELROSE PARK, IL
PROJECT NUMBER 87024.03
(Continued)

II. VOLATILE ORGANIC ANALYSIS: DETECTED COMPOUNDS BY EPA METHOD 624/8240

WELL LOCATION	SOIL SAMPLE DEPTH (ft)	CHEMICAL COMPOUND	GROUNDWATER (ug/L)	SOIL (ug/L)
B-5 (MCA-3)	ALL DEPTHS	1,1-DICHLOROETHANE	LT 4.7	LT 235
		TETRACHLOROETHENE	LT 4.1	LT 205
		1,2-DICHLOROETHANE	LT 2.8	LT 140
		1,1,1-TRICHLOROETHANE	LT 3.8	LT 190
		TOLUENE	LT 6.0	LT 300
		VINYL CHLORIDE	LT 6.5	LT 325
		TRANS 1,2-DICHLOROETHENE	LT 1.6	LT 80
		CIS 1,2-DICHLOROETHENE	19	LT 80
		TRICHLOROETHENE	LT 1.9	LT 95
B-6 (MCA-4)	11-13	1,1-DICHLOROETHANE	LT 23.5	NA
		TETRACHLOROETHENE	LT 20.5	NA
		1,2-DICHLOROETHANE	LT 14	NA
		1,1,1-TRICHLOROETHANE	LT 19	NA
		TOLUENE	LT 30	NA
		VINYL CHLORIDE	LT 32.5	NA
		TRANS 1,2-DICHLOROETHENE	LT 8	NA
		CIS 1,2-DICHLOROETHENE	LT 8	NA
		TRICHLOROETHENE	LT 9.5	NA

Lindberg Heat Treating Company
87024.WK1

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TABLE 3
ANALYTICAL SUMMARY

LINDBERG HEAT TREATING COMPANY
1975 N. RUBY STREET, MELROSE PARK, IL
PROJECT NUMBER 87024.03
(Continued)

II. VOLATILE ORGANIC ANALYSIS: DETECTED COMPOUNDS BY EPA METHOD 624/8240

WELL LOCATION	SOIL SAMPLE		GROUNDWATER (ug/L)	SOIL (ug/L)
	DEPTH (ft)	CHEMICAL COMPOUND		
B-7 (MCA-5)	3-5	1,1-DICHLOROETHANE	6.0	LT 235
		TETRACHLOROETHENE	120	LT 205
		1,2-DICHLOROETHANE	3.6	LT 140
		1,1,1-TRICHLOROETHANE	LT 3.8	LT 190
		TOLUENE	22	LT 300
		VINYL CHLORIDE	6,600	LT 325
		TRANS 1,2-DICHLOROETHENE	2,100	8,600
		CIS 1,2-DICHLOROETHENE	27,000	LT 80
		TRICHLOROETHENE	41,000	180,000

NOTES: ug/L = Micrograms per liter, equivalent to parts per billion.
mg/L = Milligrams per liter, equivalent to parts per million.
NA = Not Analyzed or Not Available.
B = Boring.
MW = Monitoring Well.
LT = Less Than.

(1) Four (4) inches of floating product noted on 9/6/90.

1. All groundwater samples collected on September 6, 1990.
2. Soil samples collected between July 9 & 13, 1990.
3. The soil analytical data should represent the worst case sample from each respective boring as observed/collected by MCA personnel.
4. Analyses conducted by Alpha Analytical Laboratories, Westborough, MA